

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Allan O. Devantier et al.)
Serial No. 10/684,222) Examiner: Paul, Disler
Filing Date: October 10, 2003) Group Art Unit No.: 2615
For SYSTEM FOR SELECTING CORRECTION) Confirmation No.: 8660
FACTORS FOR AN AUDIO SYSTEM)

DECLARATION OF INVENTORS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The undersigned, Allan Devantier and Todd Welti, hereby declare that:

1. We are the inventors of the subject matter described and claimed in the current application.
2. Allan Devantier has a Bachelor of Technology in Electrical Engineering from Ryerson University in Toronto, Ontario, Canada. Mr. Devantier has 20 years of experience in designing loudspeakers systems and audio equipment.
3. Todd Welti has a Bachelor of Electrical Engineering Technology from Cogswell College North, a branch of Cogswell College, Cupertino, CA. Mr. Welti has a Masters of Acoustics from Aalborg University, Aalborg Denmark. Mr. Welti has 9 years acoustical consulting experience and 8 years acoustical research experience at Harman International Industries. Mr. Welti is on the Editorial Review Board for the Journal of the Audio Engineering Society and is a Subject Matter Expert for the Custom Electronic Design and Installation Association (CEDIA).
4. We understand that the Patent Office stated the following: "the limitation of analyzing the plurality of frequencies less than 120 Hz is simply the inventor's preference." We disagree that analyzing frequencies less than 120 Hz is simply the inventor's preference. One application of the present invention is to generate predicted transfer functions at a plurality of

listening positions and statistically analyze the predicted transfer functions at the plurality of listening positions (such as statistically analyzing for flatness across the listening positions in order to select a configuration of the system to improve flatness from seat-to-seat). Applying this predicting/analyzing methodology is particularly advantageous at lower frequencies, such as at less than 120 Hz. In particular, because the lower frequencies have a longer wavelength, these lower frequencies may be significantly different for a first listener (at a first listening position) than for a second listener (at a second listening position) hears. Reducing the seat-to-seat variation (particularly at the lower frequencies) between the first and second listening position may thus have a significant effect, and is not merely the inventor's preference.

5. We understand that the Patent Office stated the following: "the concept of doing statistical analysis from the group consisting of mean spatial variance, mean standard deviation, mean spatial envelope, and mean spatial maximum average is commonly known in the art . . ." Applicants respectfully disagree that using these types of statistical analyses (such as mean spatial variance, mean standard deviation, mean spatial envelope, and mean spatial maximum average) in order to reduce seat-to-seat variation is commonly known. These particular types of statistical analyses provide different insights into the seat-to-seat variation, and therefore provide different ways to examine (and reduce) the seat-to-seat variation.

6. We understand that the Patent Office stated the following: "the limitation of the potential types of loudspeakers comprise a dipole loudspeaker and a monopole loudspeaker is commonly known in the art." We disagree that analyzing the potential type of loudspeaker (such as selecting a monopole and dipole loudspeakers) as a parameter to reduce seat-to-seat variation is commonly known. In an example of a 2-speaker audio system, the methodology may statistically analyze different combinations of the types of speakers (such as monopole-monopole, monopole-dipole, dipole-monopole, and dipole-dipole). Analyzing these various combinations, particularly for different types of speakers (e.g., monopole-dipole), to reduce seat-to-seat variation is not known.

7. We understand that the Patent Office stated the following: "selecting of the value to increase the output comprise selecting a value that decreases the volume of at least one of the loudspeakers in the audio system is commonly known in the art." We disagree that it is commonly known that decreasing volume of one of the speakers results in an increase in the audio system output. In essence, the Office Action states that it is commonly known to increase

acoustic efficiency by decreasing volume. We completely disagree. It is counterintuitive to decrease the volume to increase the acoustic efficiency.

8. All statements made herein are of my own knowledge and are true and that all statements made on information and belief are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States code, and that such willful statements may jeopardize the validity of the application or any patent issued therefrom.

Respectfully submitted,

Allan Devantier

Allan Devantier

11/21/2007

Date

Todd Welti

Todd Welti

11/21/07

Date